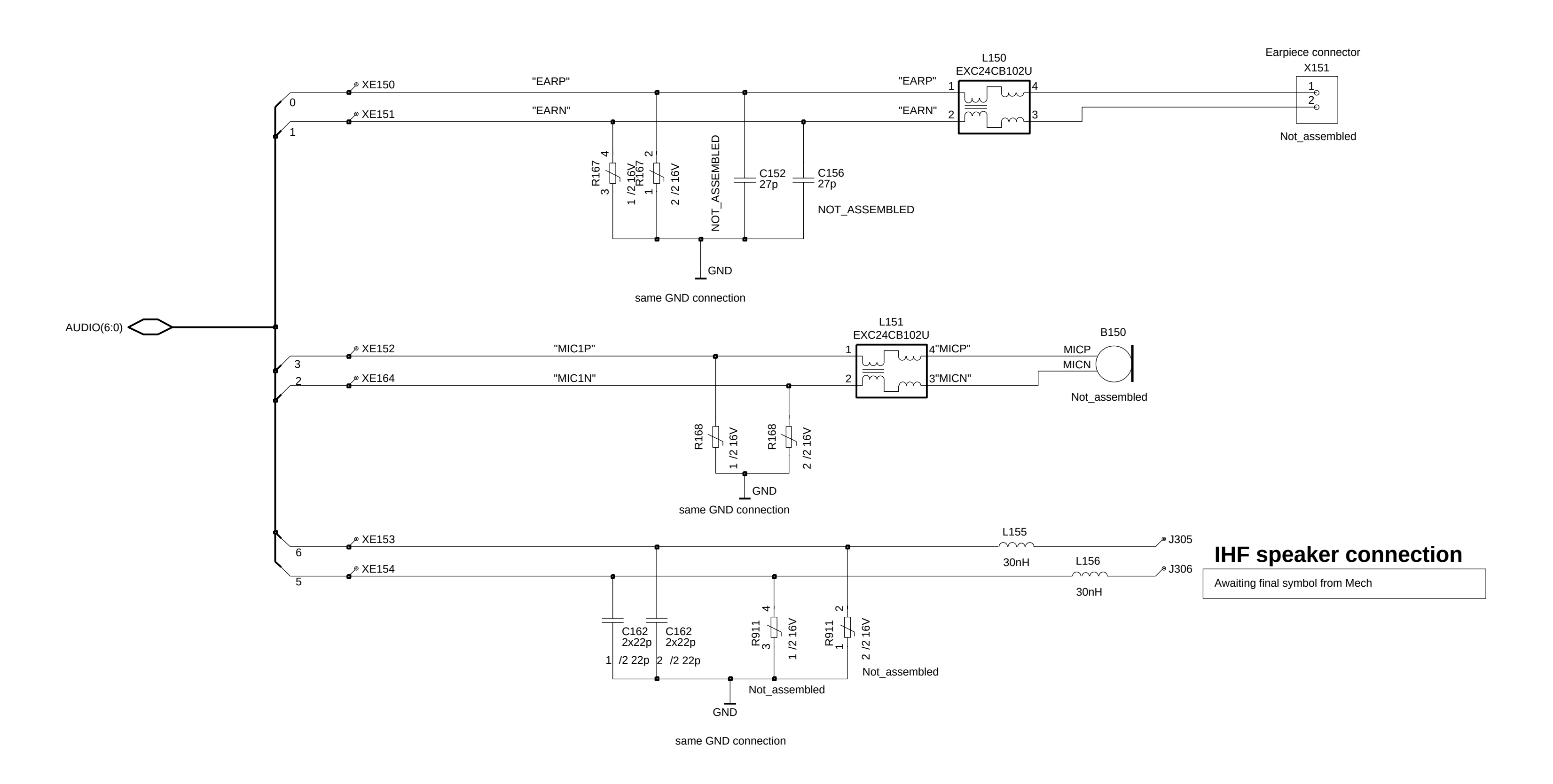
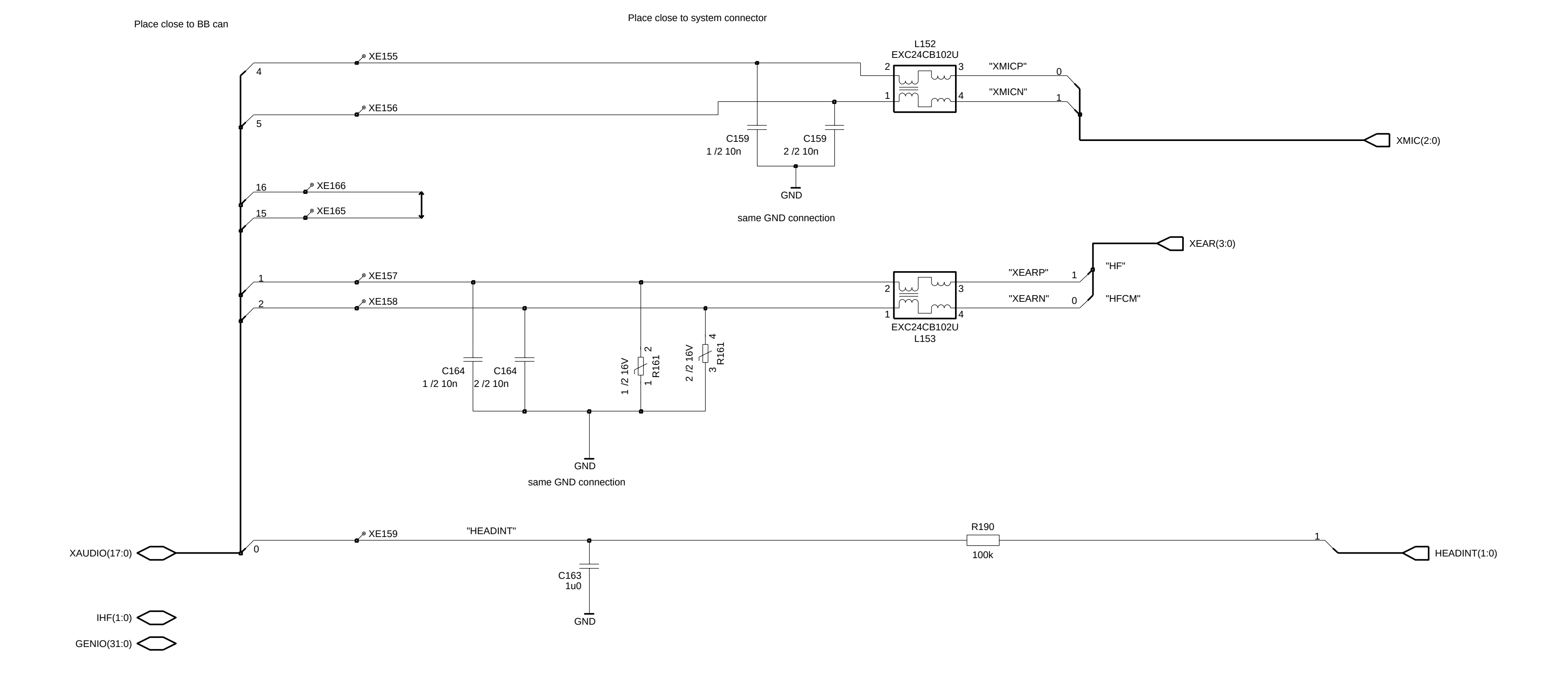
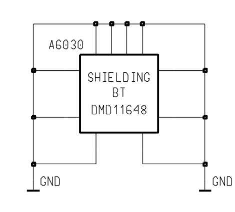
Audio

G_AUDIO(11:0)
EAR(1:0)
SLOWAD(6:0)
AUDUEMCTRL(3:0)
UIDRV(5:0)
MIC(2:0)
MCBSP2(5:0)
APE_AUDIO(4:0)
APE_GPIO(15:0)
IHF_XEAR(1:0)
HOOKINT
PUSL(3:0)

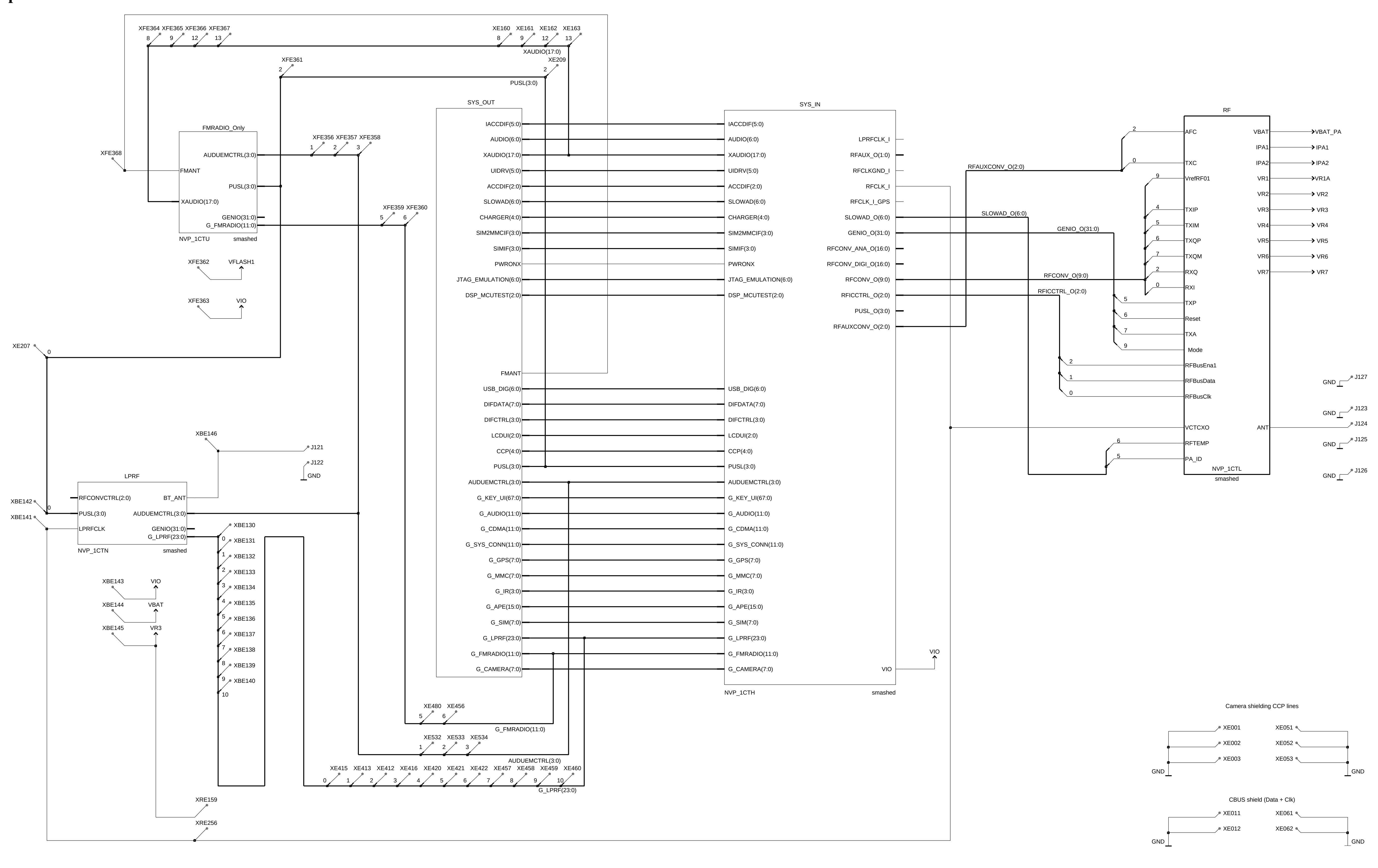




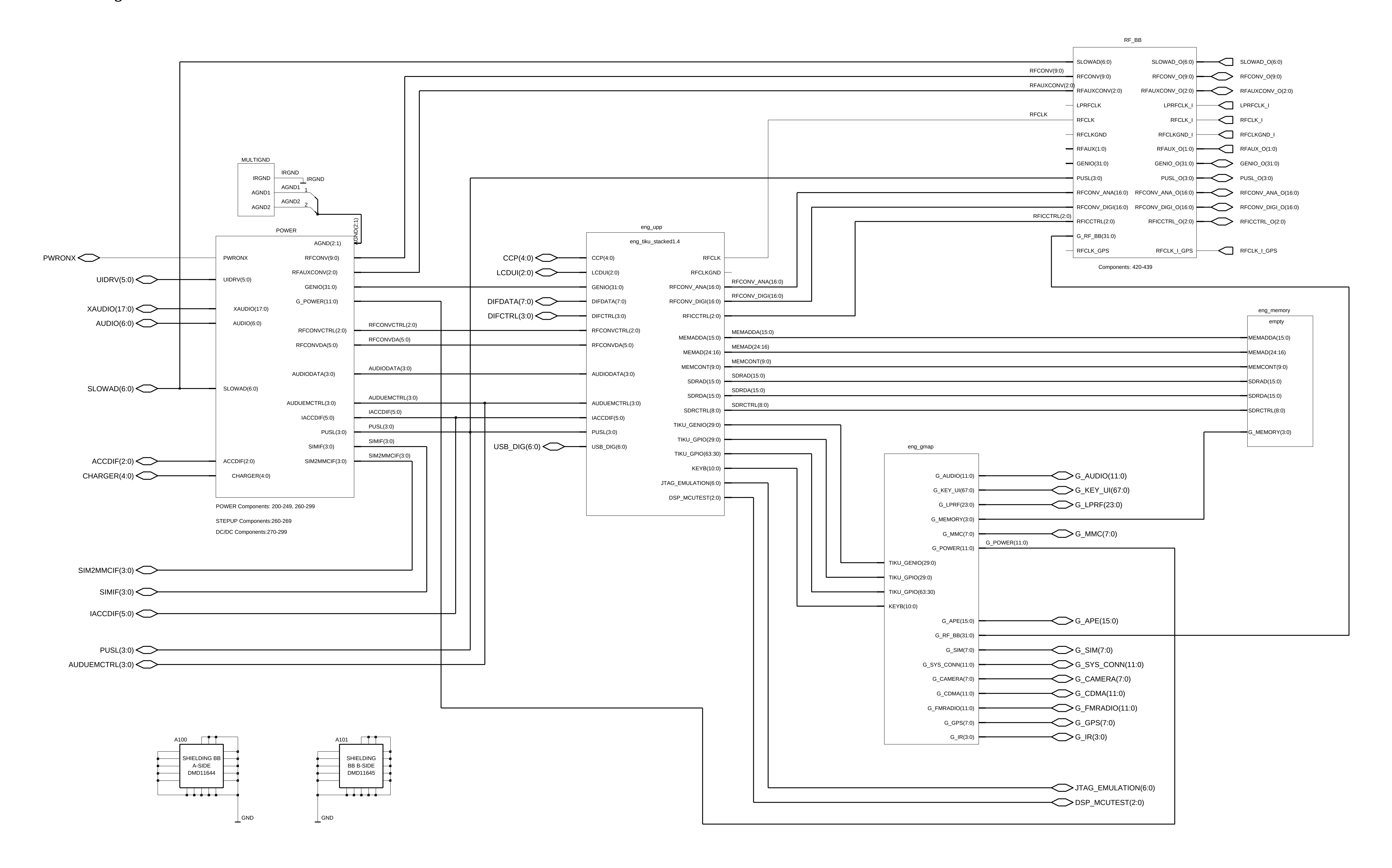
BTH COST



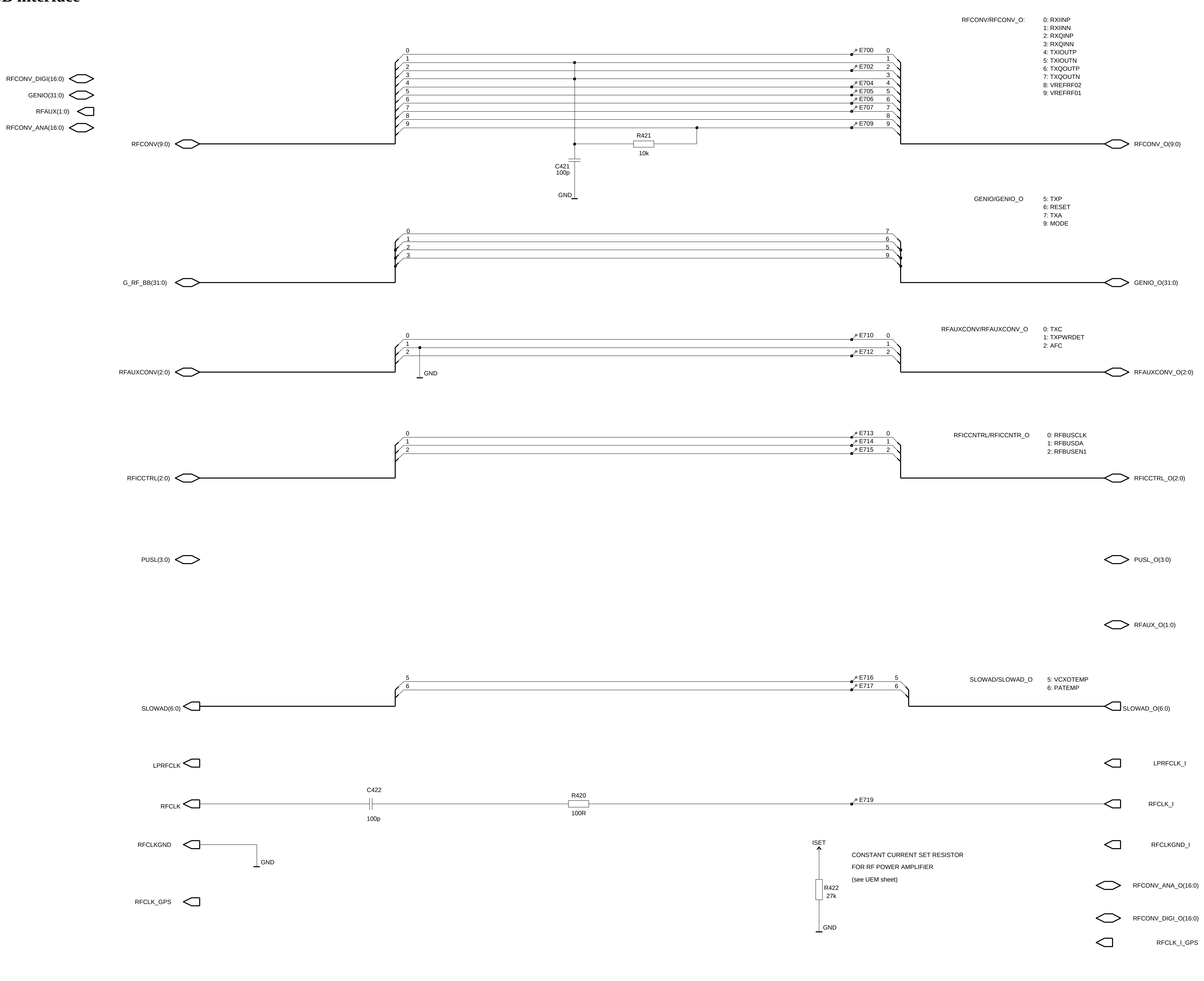
Top level


SYS_OUT
SYS_IN
FMRADIO_Only
LPRF
RF
NVP_1CTU
NVP_1CTN
NVP_1CTH
NVP_1CTL
smashed
IACCDIF(5:0)
AUDIO(6:0)
XAUDIO(17:0)
UIDRV(5:0)
ACCDIF(2:0)
SLOWAD(6:0)
CHARGER(4:0)
SIM2MMCIF(3:0)
SIMIF(3:0)
PWRONX
JTAG_EMULATION(6:0)
DSP_MCUTEST(2:0)
FMANT
USB_DIG(6:0)
DIFDATA(7:0)
DIFCTRL(3:0)
LCDUI(2:0)
CCP(4:0)
PUSL(3:0)
AUDUEMCTRL(3:0)
G_KEY_UI(67:0)
G_AUDIO(11:0)
G_CDMA(11:0)
G_SYS_CONN(11:0)
G_GPS(7:0)
G_MMC(7:0)
G_IR(3:0)
G_APE(15:0)
G_SIM(7:0)
G_LPRF(23:0)
G_FMRADIO(11:0)
G_CAMERA(7:0)
LPRFCLK_I
RFAUX_O(1:0)
RFCLKGND_I
RFCLK_I
RFCLK_I_GPS
SLOWAD_O(6:0)
GENIO_O(31:0)
RFCONV_ANA_O(16:0)
RFCONV_DIGI_O(16:0)
RFCONV_O(9:0)
RFICCTRL_O(2:0)
PUSL_O(3:0)
RFAUXCONV_O(2:0)
VIO
GENIO(31:0)
G_FMRADIO(11:0)
RFCONVCTRL(2:0)
BT_ANT
LPRFCLK
G_LPRF(23:0)
AFC
TXC
VrefRF01
TXIP
TXIM
TXQP
TXQM
RXQ
RXI
TXP
Reset
TXA
Mode
RFBusEna1
RFBusData
RFBusClk
VCTCXO
RFTEMP
PA_ID
ANT
VBAT
IPA1
IPA2
VR1
VR2
VR3
VR4
VR5
VR6
VR7
VBAT_PA
VR1A
XFE364 XFE365 XFE366 XFE367
XE160 XE161 XE162 XE163
XFE361
XE209
XFE368
XFE356 XFE357 XFE358
XFE359 XFE360
XFE362 VFLASH1
XFE363
XE207
XBE146
J121
J122
GND
XBE142
XBE141
XBE130
XBE131
XBE132
XBE133
XBE134
XBE135
XBE136
XBE137
XBE138
XBE139
XBE140
XBE143
XBE144
XBE145
VBAT
VR3
XRE159
XRE256
XE480 XE456
XE532 XE533 XE534
XE415 XE413 XE412 XE416 XE420 XE421 XE422 XE457 XE458 XE459 XE460
J127
J123
J124
J125
J126
Camera shielding CCP lines
XE001
XE002
XE003
XE051
XE052
XE053
CBUS shield (Data + Clk)
XE011
XE012
XE061
XE062

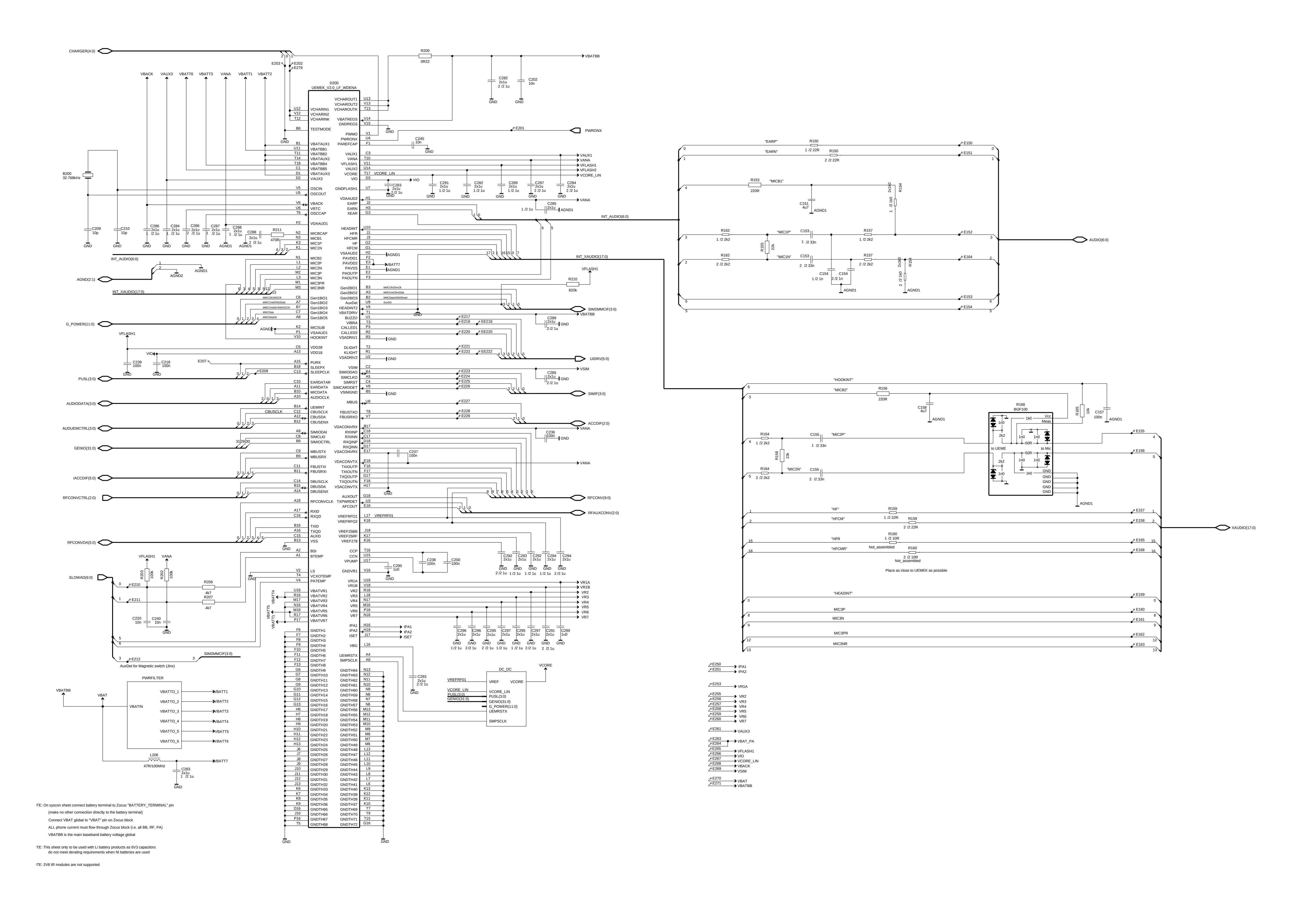
Micro BB enginel



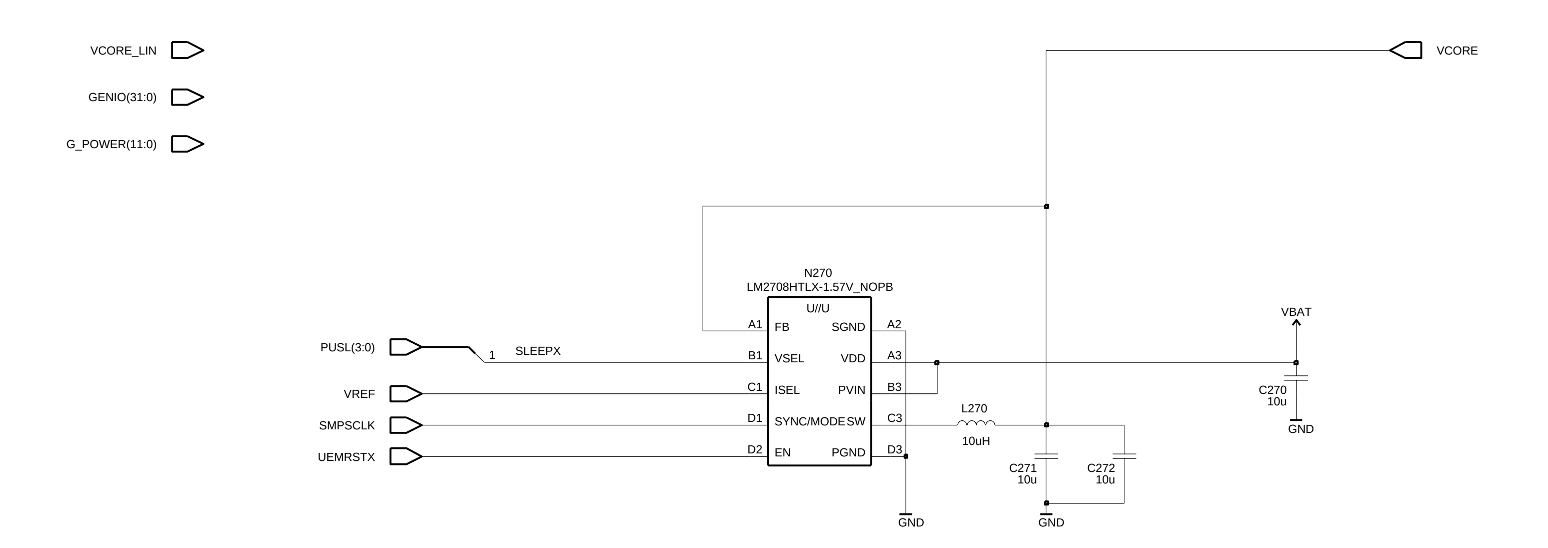
RF-BB interface



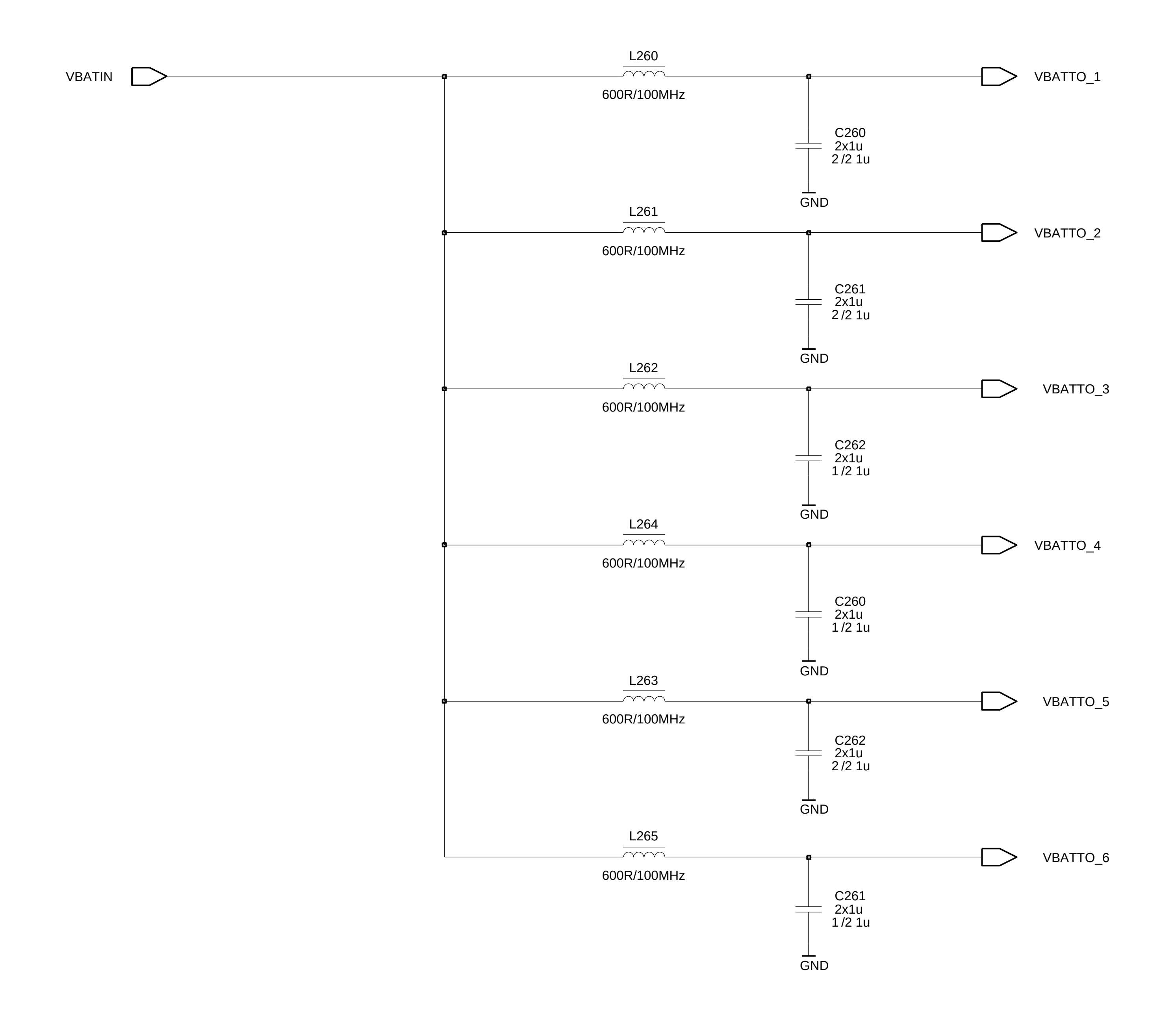
UEMEK



DC-DC for Tiku

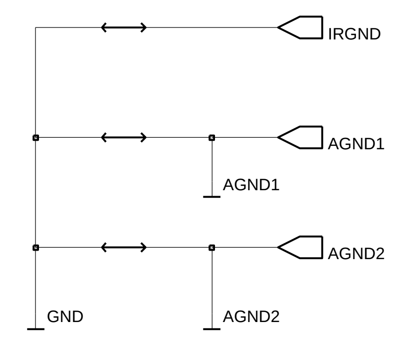


Light filtering



NOTE: This sheet uses dual 1uF capacitors. Check that full approval has been granted for these parts before use, or use this sheet at risk

MultiGND



Flash memory

MEMAD(24:16)

G_MEMORY(3:0)

MEMCONT(9:0)

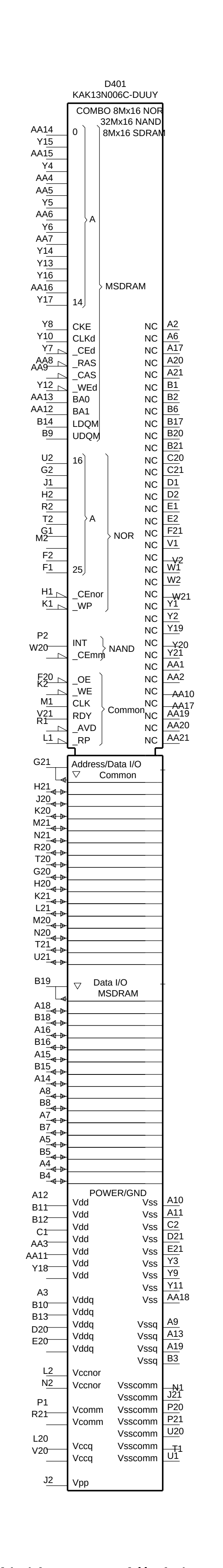
SDRAD(15:0)

SDRCTRL(8:0)

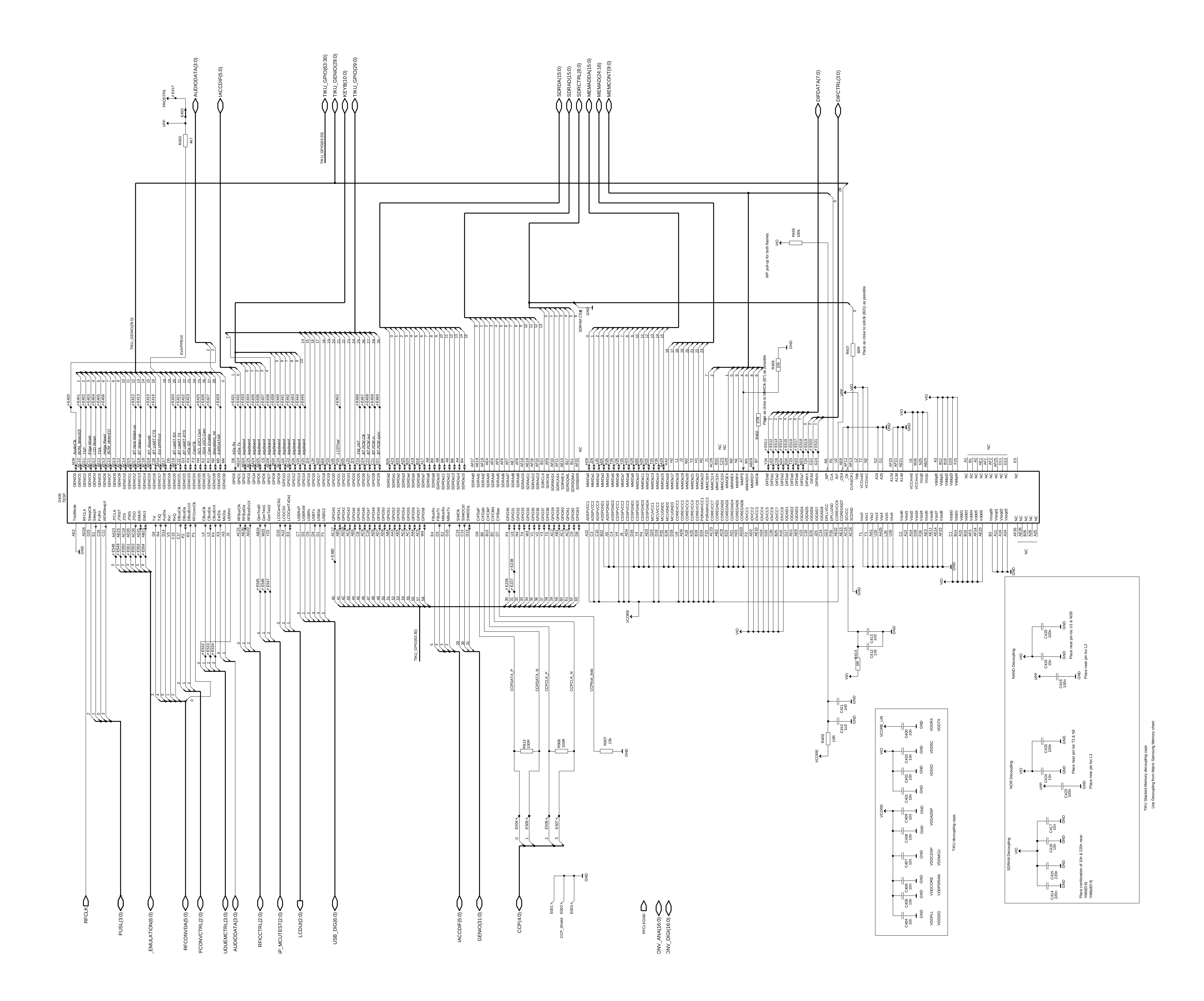
SDRDA(15:0)

MEMAD(24:16)

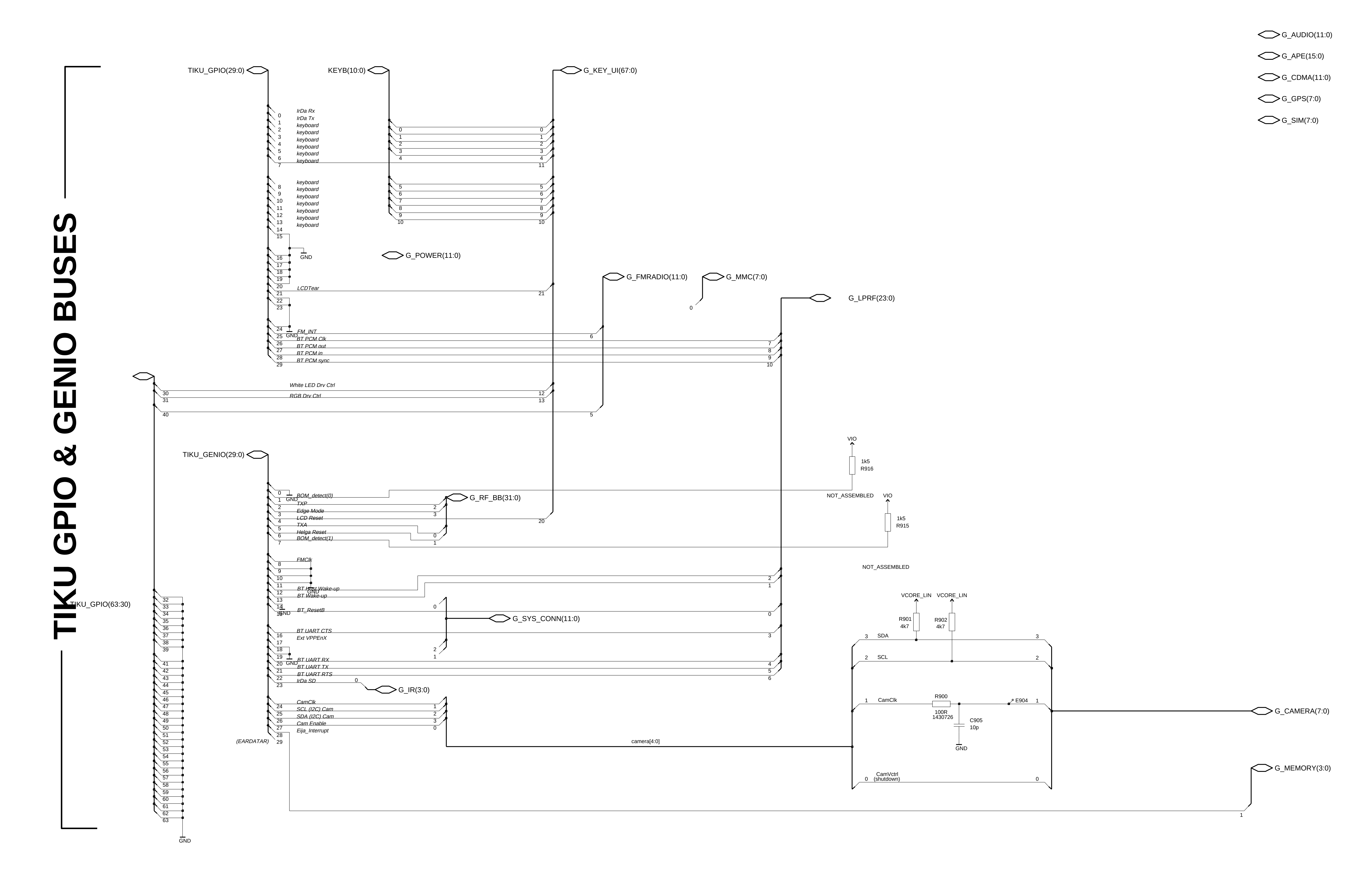
MEMADDA(15:0)



Tiku EDGE

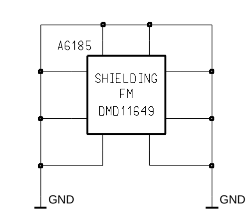


Tiku GPIO and GENIO

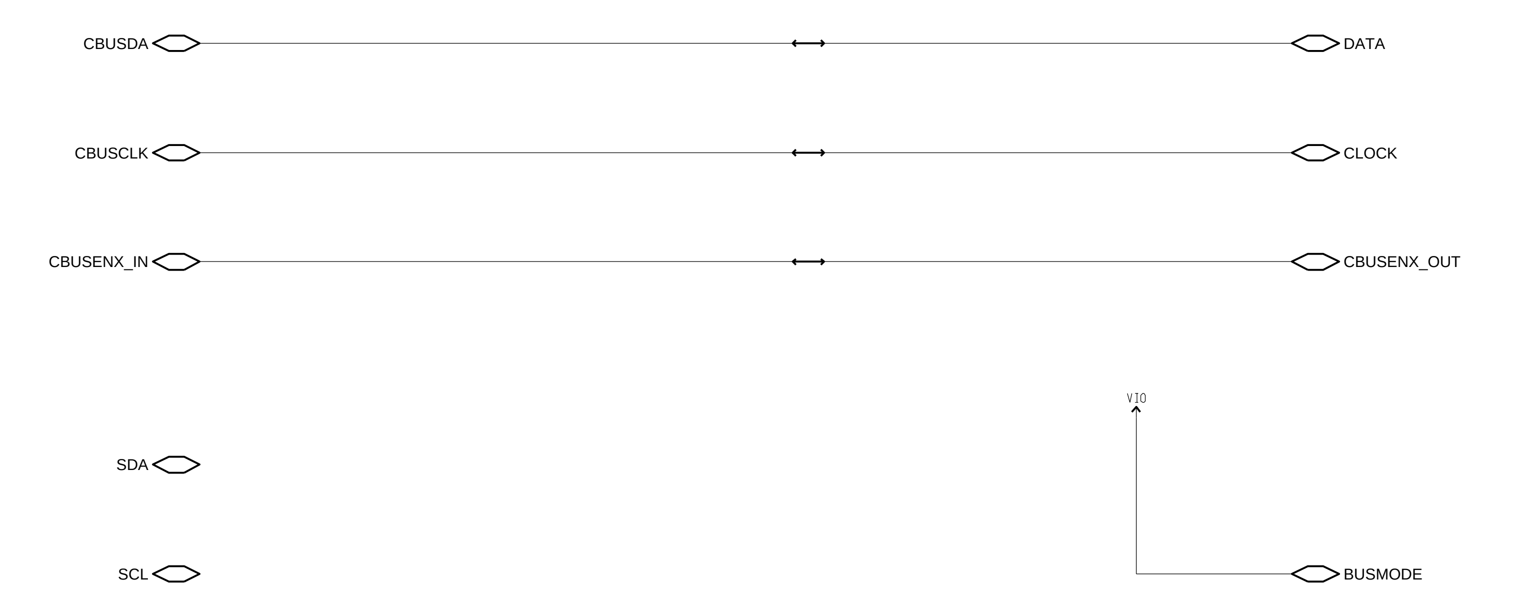


FM radio

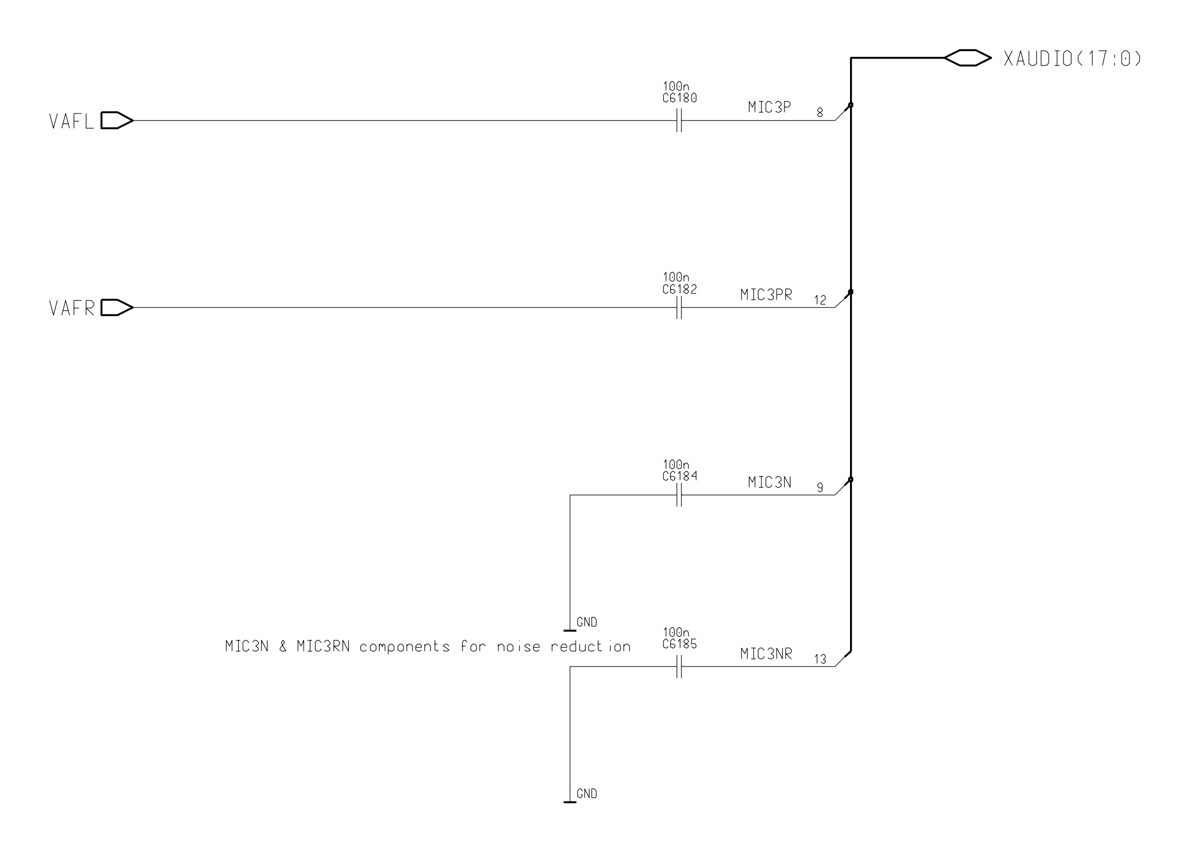
AUDUEMCTRL(3:0)
FE356 FE357 FE358
G_FMRADIO(11:0)
FE359 FE360
CBUS
CBUSDA DATA
CBUSCLK CLOCK
CBUSENX_IN CBUSENX_OUT
SDA
SCL BUSMODE
Sub-block contains no components
FE362 VFLASH1
FE363 VIO
VFLASH1 VIO VFLASH1
TEA5761UK
VDD
DATA
CLOCK
BUSMODE
BUSENABLE
CBUS_ENX
VREFDIG VAFR
VAFL
FREQIN
RFIN1
RFIN2
RFGND
INTX
VCC
Components: 6156-6175
FE368
FMANT
C6176 100p
C6178 27p
C6179 47p
L6176 120nH
GND
SLEEPCLK
FM_OUT
stereo_diff
VAFR
VAFL XAUDIO(17:0)
Components: 6180-6185
FE364 FE365 FE366 FE367
XAUDIO(17:0)
FE361
PUSL(3:0)



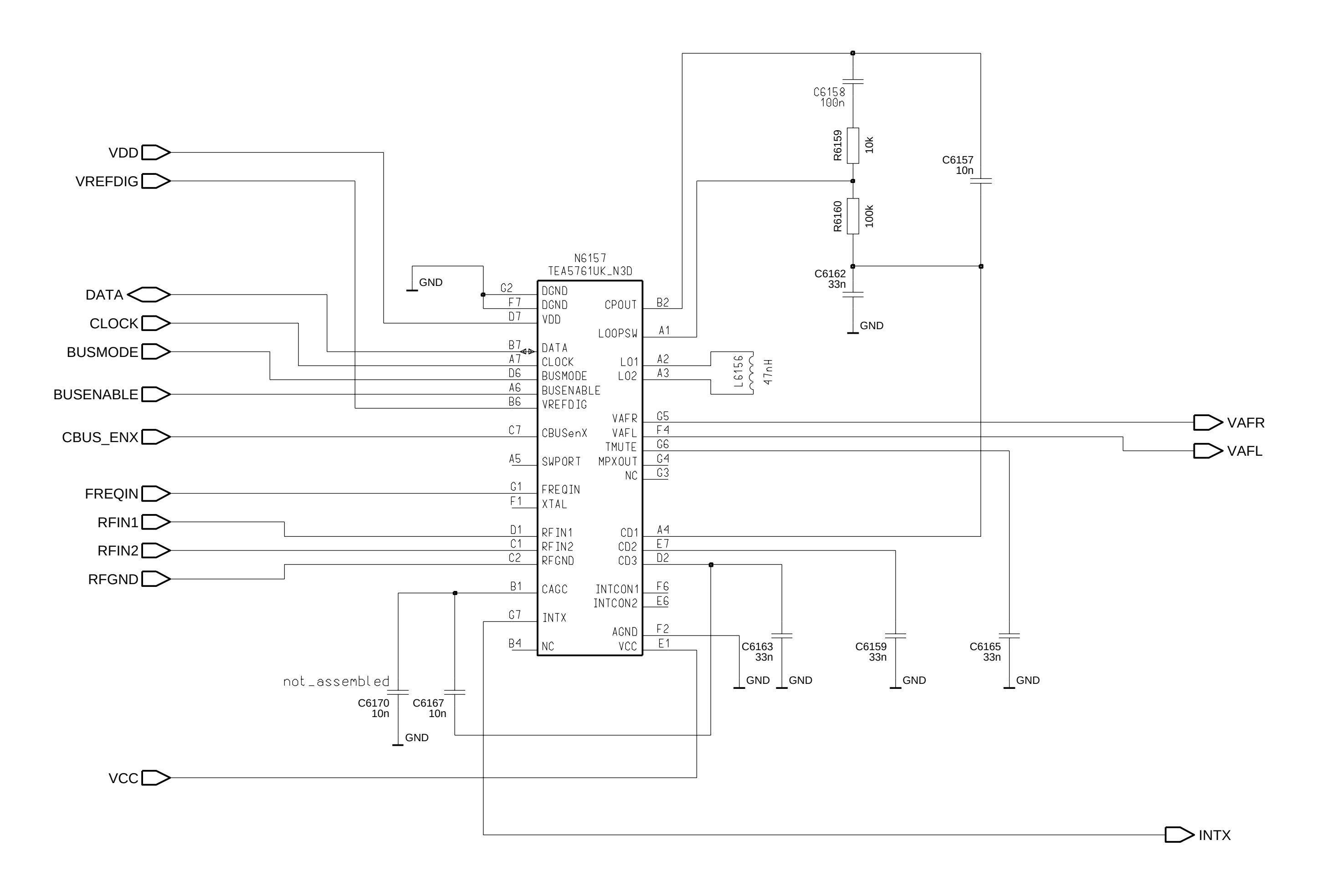
CBUS


CBUSDA
DATA
CBUSCLK
CLOCK
CBUSENX_IN
CBUSENX_OUT
VIO
SDA
SCL
BUSMODE

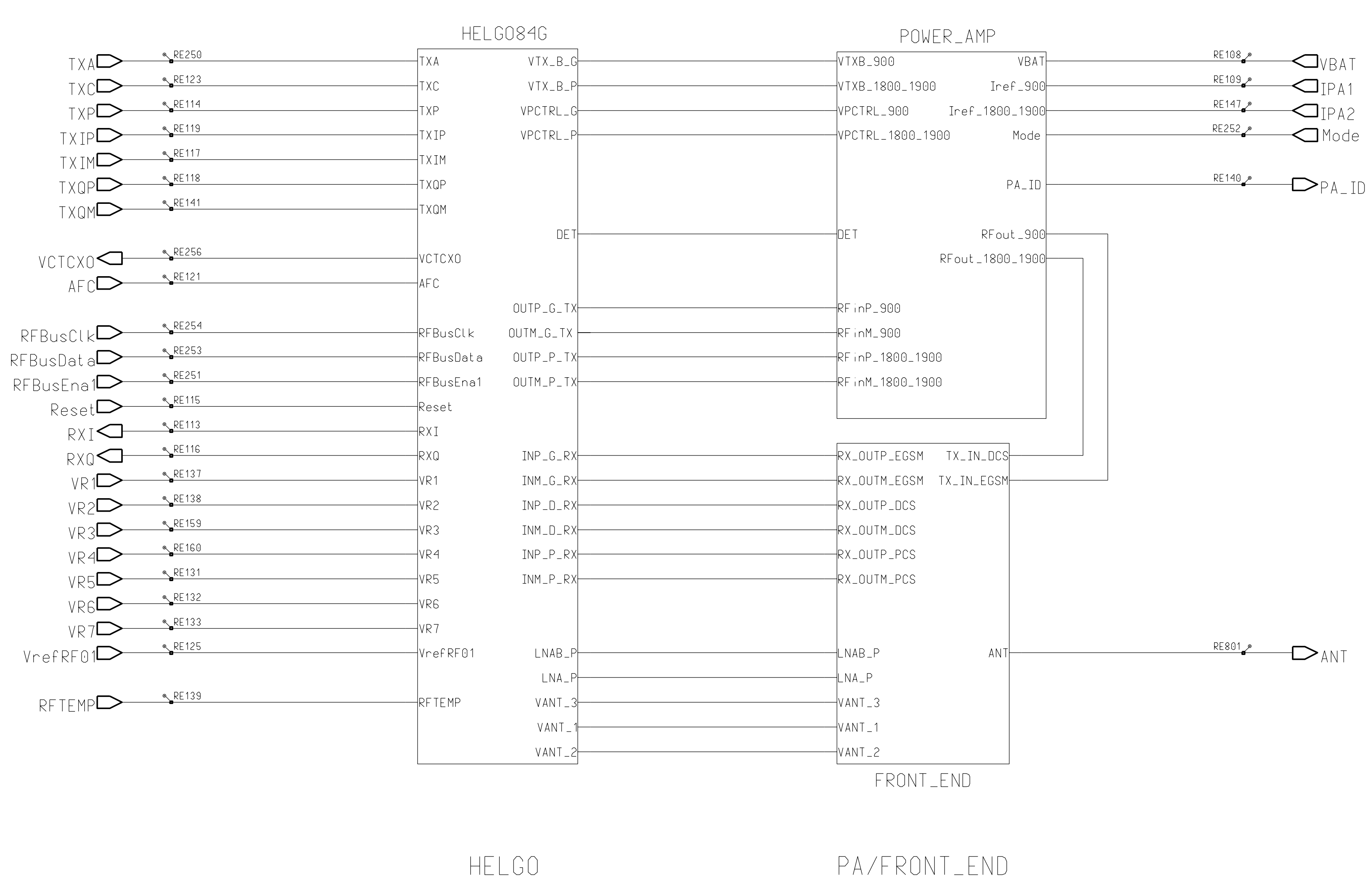
Differential stereo

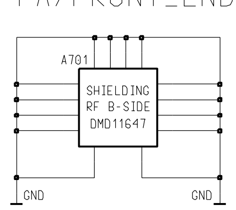


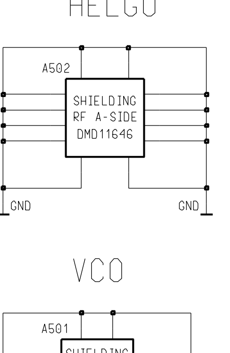
TEA5761UK


VDD
VREFDIG
DATA
CLOCK
BUSMODE
BUSENABLE
CBUS_ENX
FREQIN
RFIN1
RFIN2
RFGND
VCC
N6157
TEA5761UK_N3D
GND
DGND
DGND
VDD
DATA
CLOCK
BUSMODE
BUSENABLE
VREFDIG
CBUSenX
SWPORT
FREQIN
XTAL
RFIN1
RFIN2
RFGND
CAGC
INTX
NC
CPOUT
LOOPSW
LO1
LO2
VAFR
VAFL
TMUTE
MPXOUT
NC
CD1
CD2
CD3
INTCON1
INTCON2
AGND
VCC
C6158
100n
R6159
10k
R6160
100k
C6162
33n
C6157
10n
L6156
47nH
VAFR
VAFL
C6163
33n
C6159
33n
C6165
33n
not_assembled
C6170
10n
C6167
10n
INTX

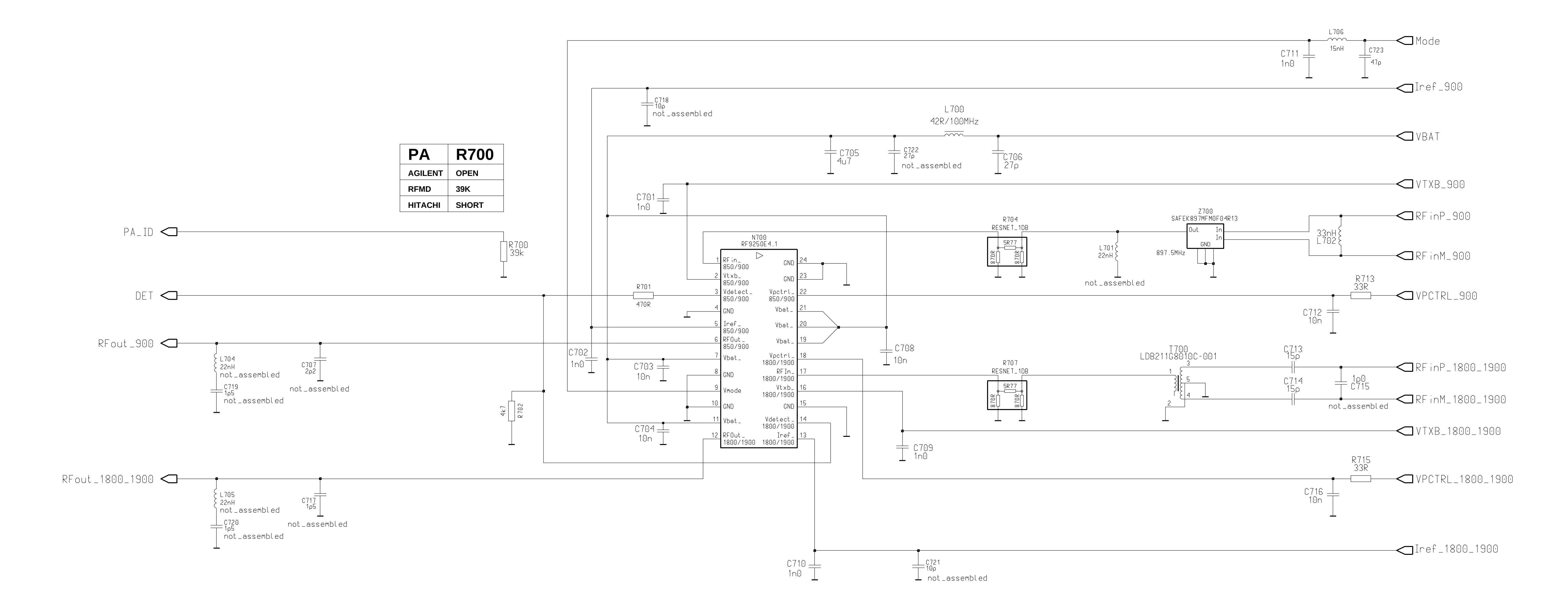
RF top level


HELGO84G
POWER_AMP
FRONT_END
TXA
TXC
TXP
TXIP
TXIM
TXQP
TXQM
VCTCXO
AFC
RFBusClk
RFBusData
RFBusEna1
Reset
RXI
RXQ
VR1
VR2
VR3
VR4
VR5
VR6
VR7
VrefRF01
RFTEMP
VTX_B_G
VTX_B_P
VPCTRL_G
VPCTRL_P
DET
OUTP_G_TX
OUTM_G_TX
OUTP_P_TX
OUTM_P_TX
INP_G_RX
INM_G_RX
INP_D_RX
INM_D_RX
INP_P_RX
INM_P_RX
LNAB_P
LNA_P
VANT_3
VANT_1
VANT_2
VTXB_900
VTXB_1800_1900
VPCTRL_900
VPCTRL_1800_1900
RFinP_900
RFinM_900
RFinP_1800_1900
RFinM_1800_1900
VBAT
Iref_900
Iref_1800_1900
Mode
PA_ID
RFout_900
RFout_1800_1900
RX_OUTP_EGSM
RX_OUTM_EGSM
RX_OUTP_DCS
RX_OUTM_DCS
RX_OUTP_PCS
RX_OUTM_PCS
TX_IN_DCS
TX_IN_EGSM
ANT
IPA1
IPA2
HELGO
PA/FRONT_END
VCO

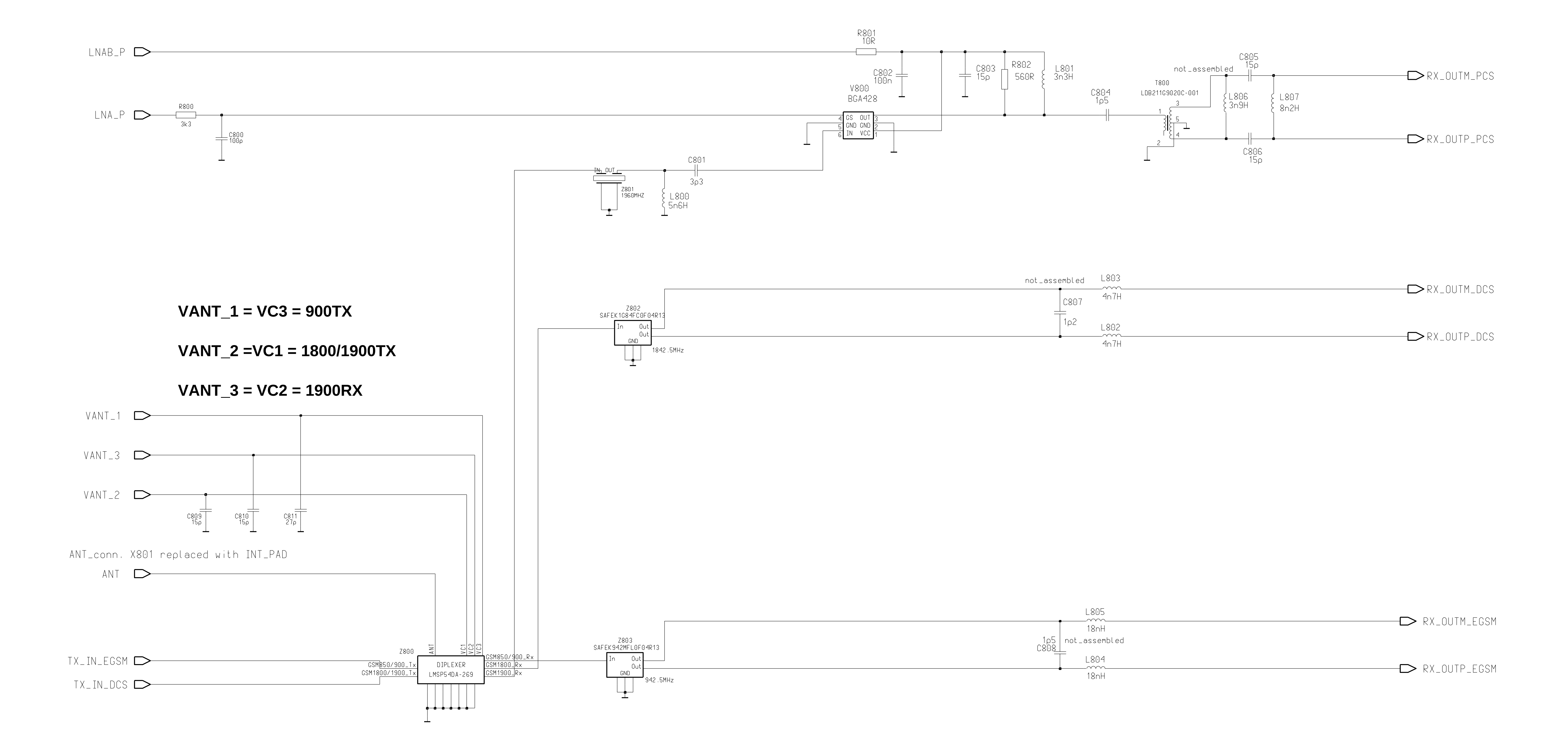

A701
SHIELDING
RF B-SIDE
DMD11647
GND
GND


A502
SHIELDING
RF A-SIDE
DMD11646
GND
GND
A501
SHIELDING
VCO
DMD11792
GND
GND

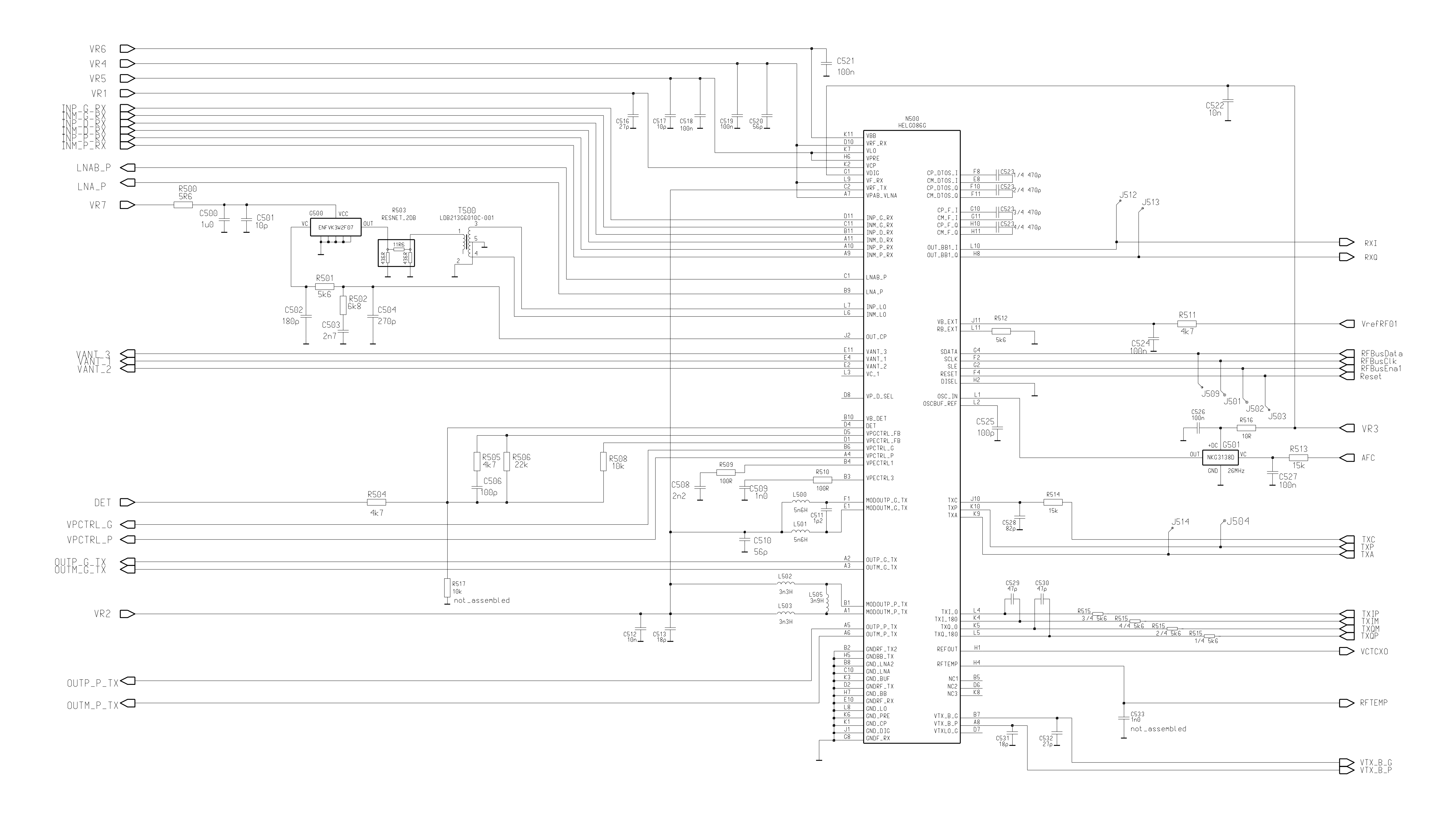
Power amplifier and detection



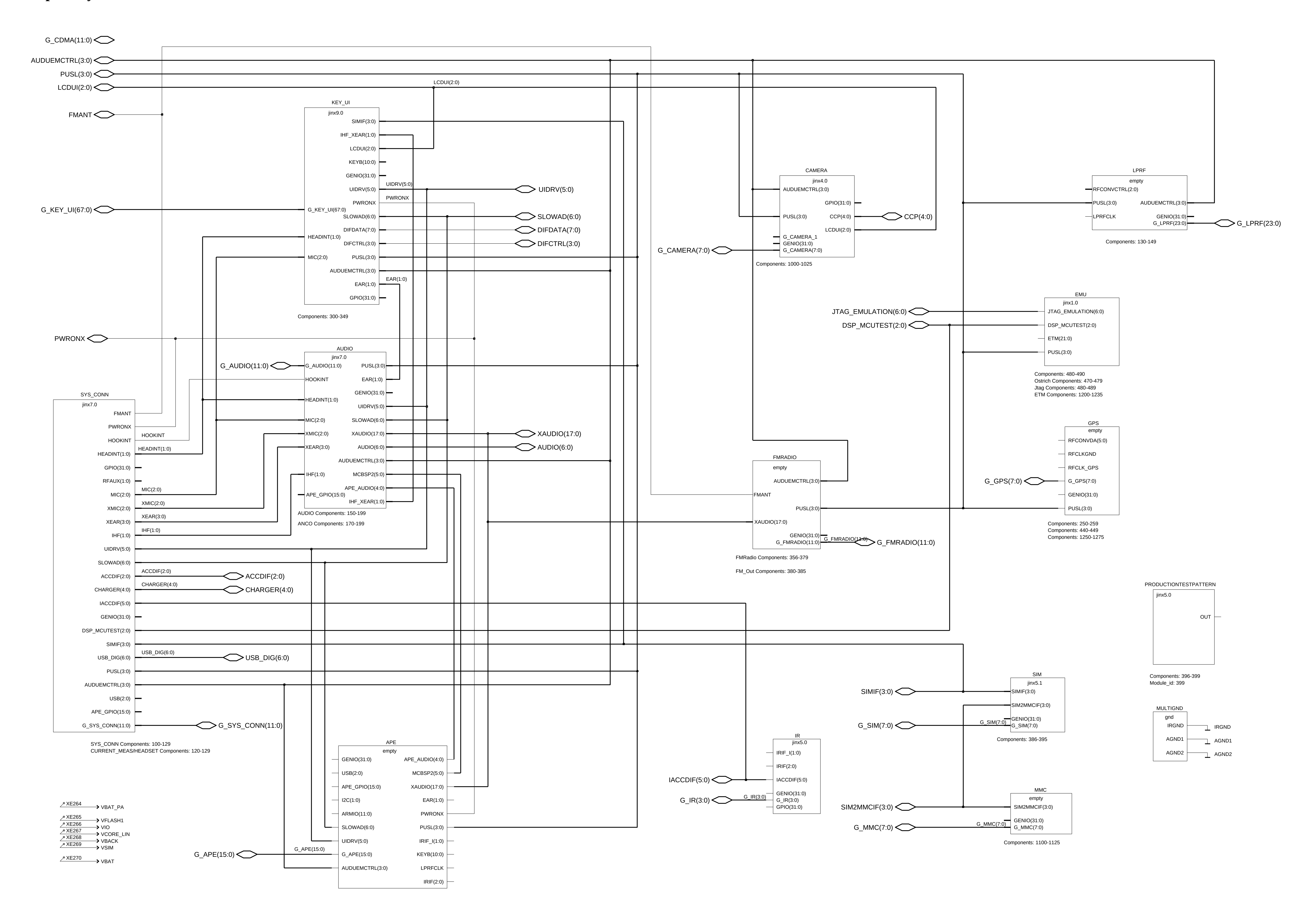
RX front end and antenna switch



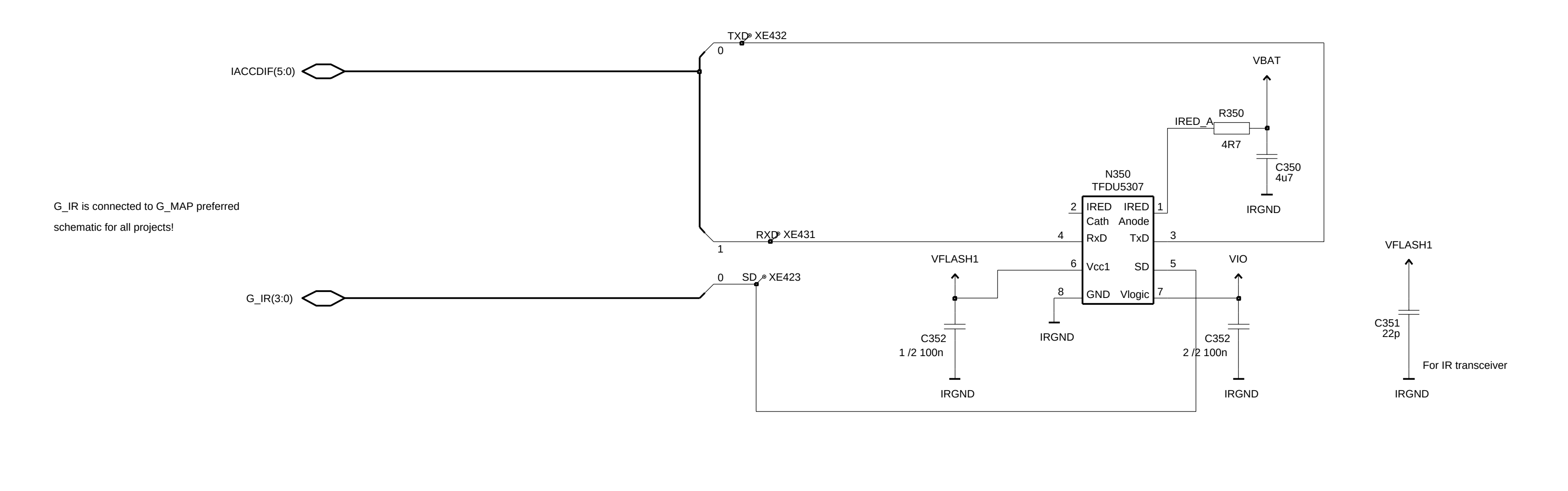
Helgo


VR6
VR4
VR5
VR1
INP_G_RX
INM_G_RX
INP_D_RX
INM_D_RX
INP_P_RX
INM_P_RX
LNAB_P
LNA_P
VR7
VANT_3
VANT_1
VANT_2
DET
VPCTRL_G
VPCTRL_P
OUTP_G_TX
OUTM_G_TX
VR2
OUTP_P_TX
OUTM_P_TX
N500
HELGO86G
RXI
RXQ
VrefRF01
RFBusData
RFBusClk
RFBusEna1
Reset
VR3
AFC
TXC
TXP
TXA
TXIP
TXIM
TXQM
TXQP
VCTCXO
RFTEMP
VTX_B_G
VTX_B_P

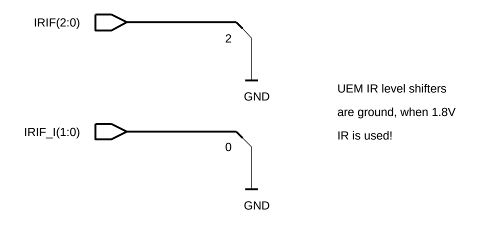
Micro BB top levely

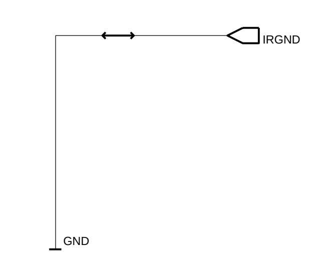


IR module



GENIO(31:0)
GPIO(31:0)

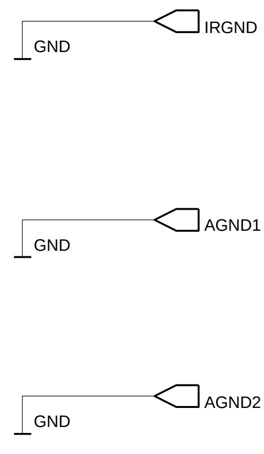




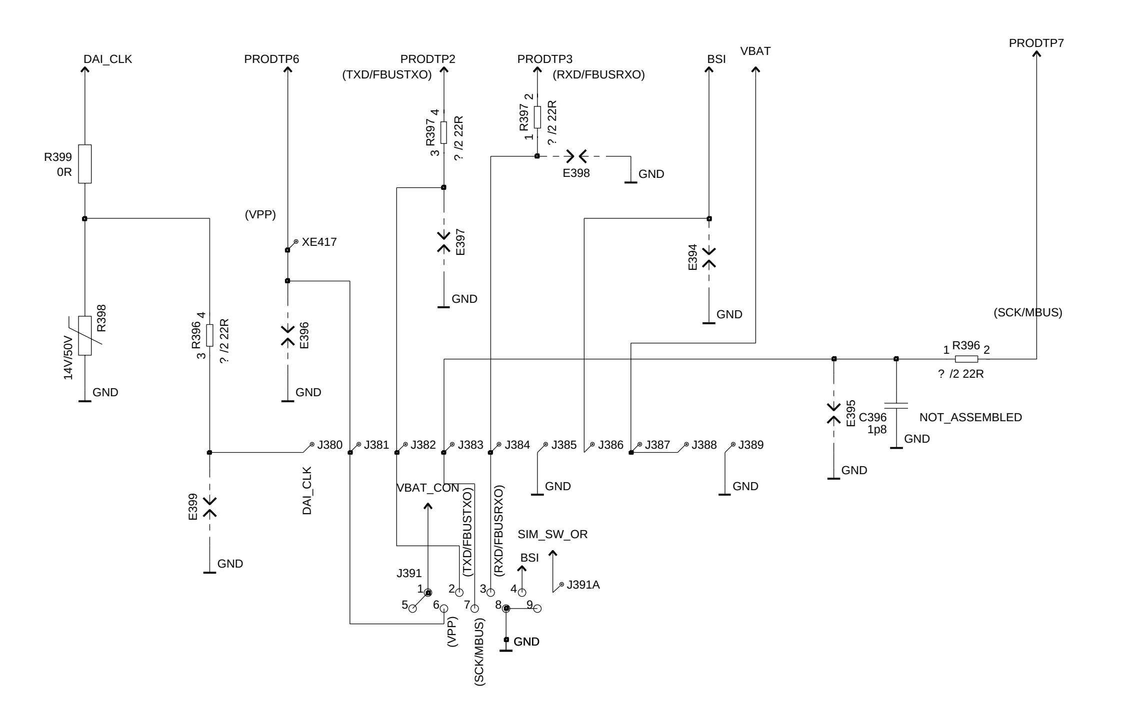
Used referenses

C	350 - 353
N	350
R	350

MultiGND symbol bypass

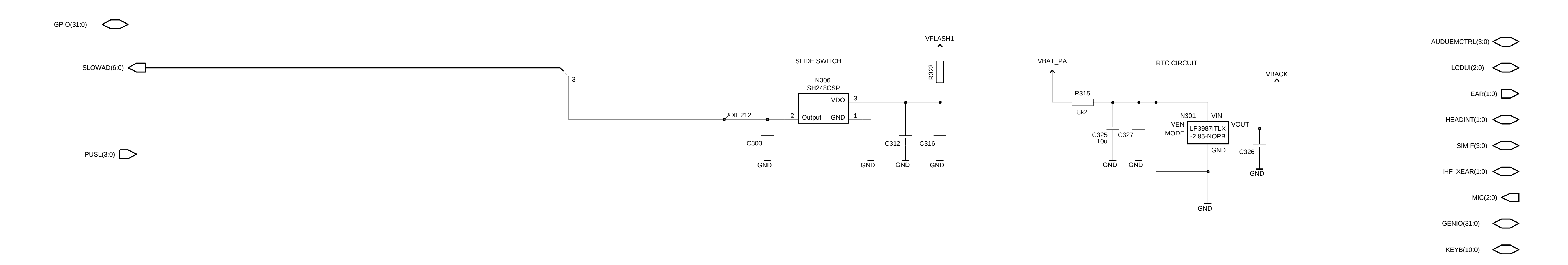


5 pin production test pattern

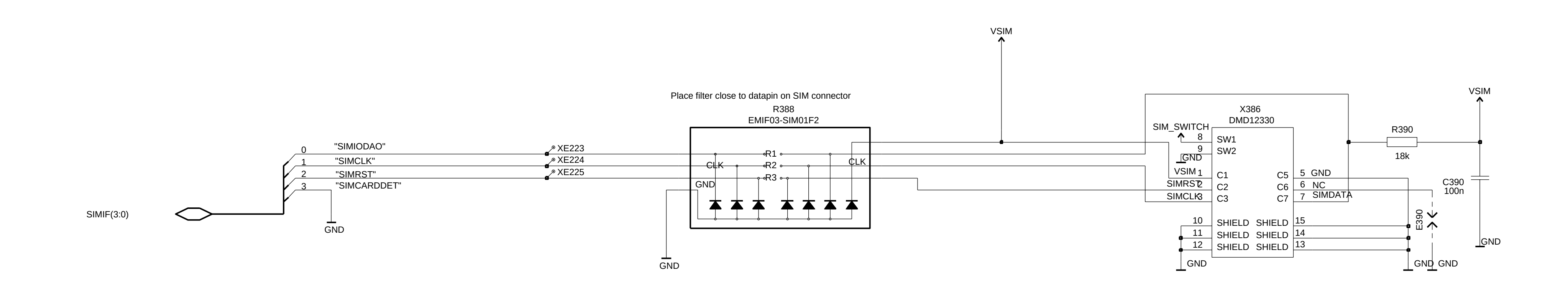


OUT

UI


GPIO(31:0)
SLOWAD(6:0)
PUSL(3:0)
SLIDE SWITCH
N306
SH248CSP
VDO
Output
GND
XE212
C303
C312
C316
VFLASH1
R323
VBAT_PA
RTC CIRCUIT
R315
8k2
C325
10u
C327
N301
LP3987ITLX
-2.85-NOPB
VEN
MODE
VIN
VOUT
C326
VBACK
GND
AUDUEMCTRL(3:0)
LCDUI(2:0)
EAR(1:0)
HEADINT(1:0)
SIMIF(3:0)
IHF_XEAR(1:0)
MIC(2:0)
GENIO(31:0)
KEYB(10:0)
G_KEY_UI(67:0)
XE236
XE237
XE238
VBAT
R312
C306
R313
BSH201
V306
M300
LVM8L3FVA
NOT_ASSEMBLED
C300
V307
1PS79SB30
C307
XE217
UIDRV(5:0)
PWRONX
XE201
Z300
EMIF10-COM01F2
XE433 COL0
XE434 COL1
XE444 SELECT
XE441 ROW2
XE440 ROW1
XE439 ROW0
XE435 COL2
COL0
COL1
SELECT
ROW2
ROW1
ROW0
COL2
PWRONX
C318
C319
1 /2 10n
2 /2 10n
UILED1+
UILED1-
SOFT LEFT
SOFT RIGHT
SELECT
ROLLER_A
ROLLER_B
ROLLER_C
SEND
PWR/END
UILED2+
UILED2-
X300
XE404
XE452
C320
V300
R304
V305
PEMX1_EMX1T2R
R305
V304
PEMX1_EMX1T2R
R306
R307
R308
R314
R310
R311
XE220
CALLLED2
XE222
KLIGHT
XE218
VIBRA
DLIGHT
XE221
R316
V301
2SK3019-TL
V302
2SK3019-TL
R319
N300
LM2795TLX-NOPB
BRGT
SD
POUT
C1+
C1-
C2+
C2-
ISET
VIN
GND
C313
C314
C305
R309
C315
LED1+
LED2+
LED3+
C321
C322
C323
C324
X302
XE519 WriteX
XE511
XE512
XE513
XE514
DIFCTRL(3:0)
LED1+
LED2+
LED-
LED3+
XE520 D/!C
CSX
XE518
XE517
XE516
XE515
TearingEffect
XE521 !RD
ResetX
DIFDATA(7:0)
VDDI
VDD
VIO
L301
C309
C308
VFLASH1
L302
C311
C310

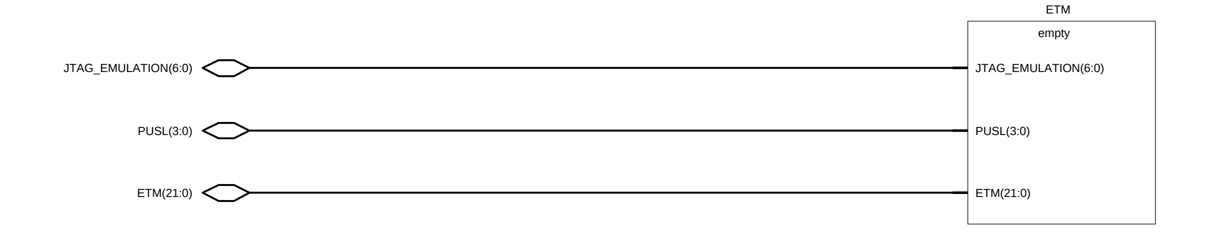
SIM reader


VSIM
Place filter close to datapin on SIM connector
R388
EMIF03-SIM01F2
X386
DMD12330
SIM_SWITCH
R390
18k
VSIM
C390
100n
E390
"SIMIODAO"
"SIMCLK"
"SIMRST"
"SIMCARDDET"
XE223
XE224
XE225
SIMIF(3:0)
GND
CLK
GND
SIMRST
SIMCLK
SIMDATA
SHIELD
GENIO(31:0)
SIM2MMCIF(3:0)
G_SIM(7:0)

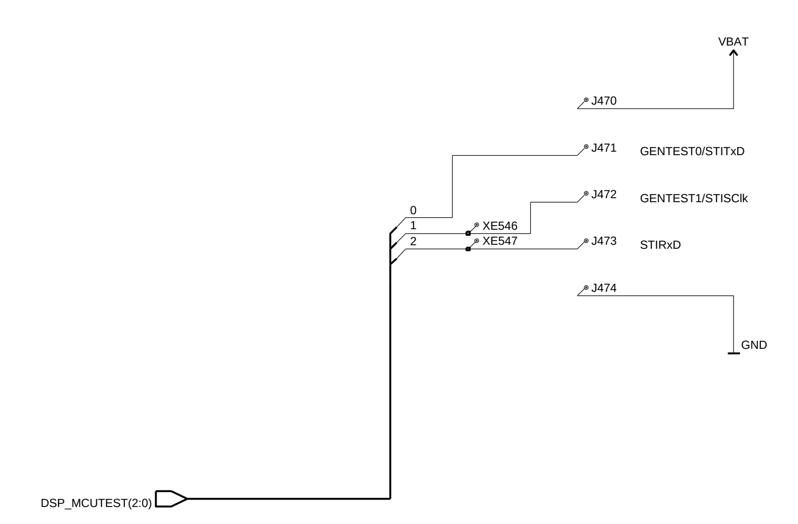
Test and emulator interface



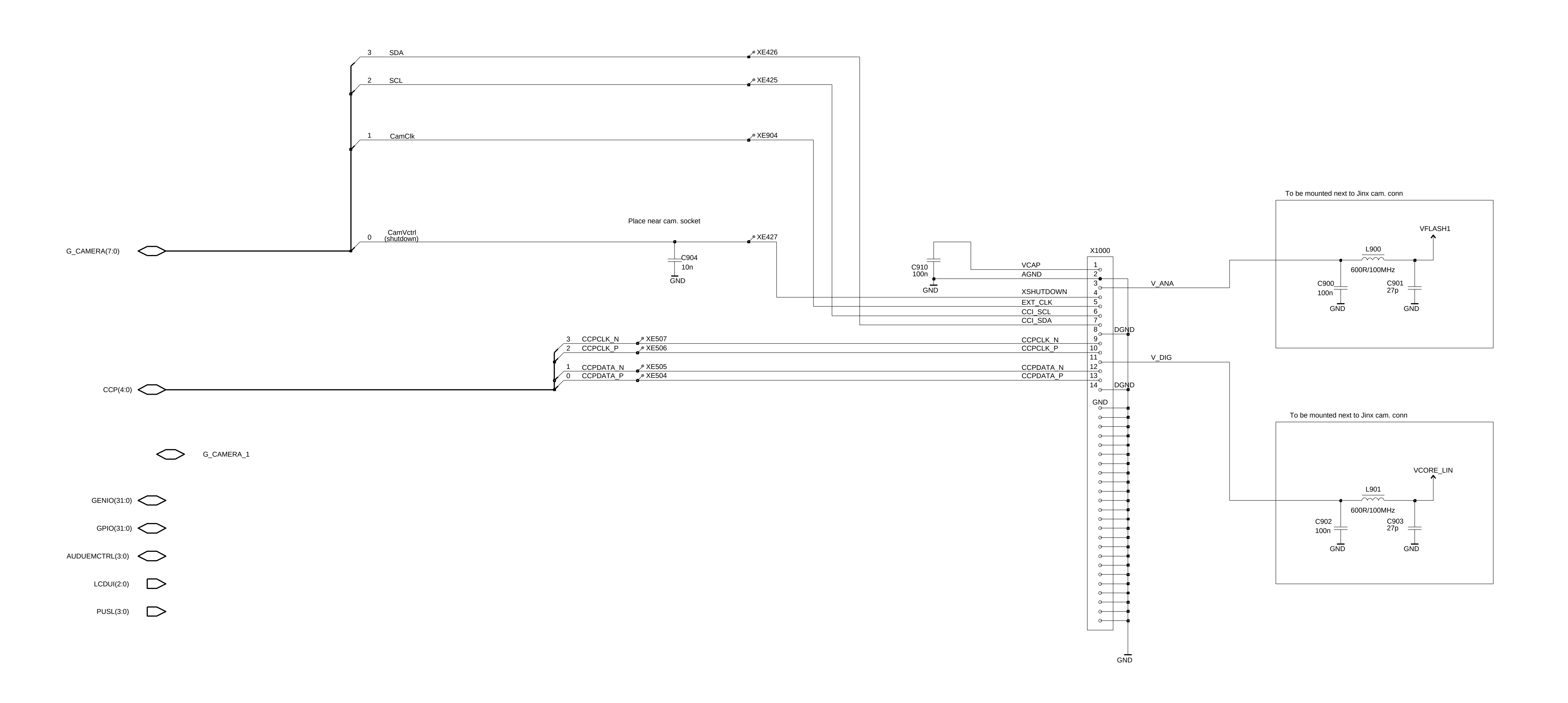




Testpoints based Ostrich interface

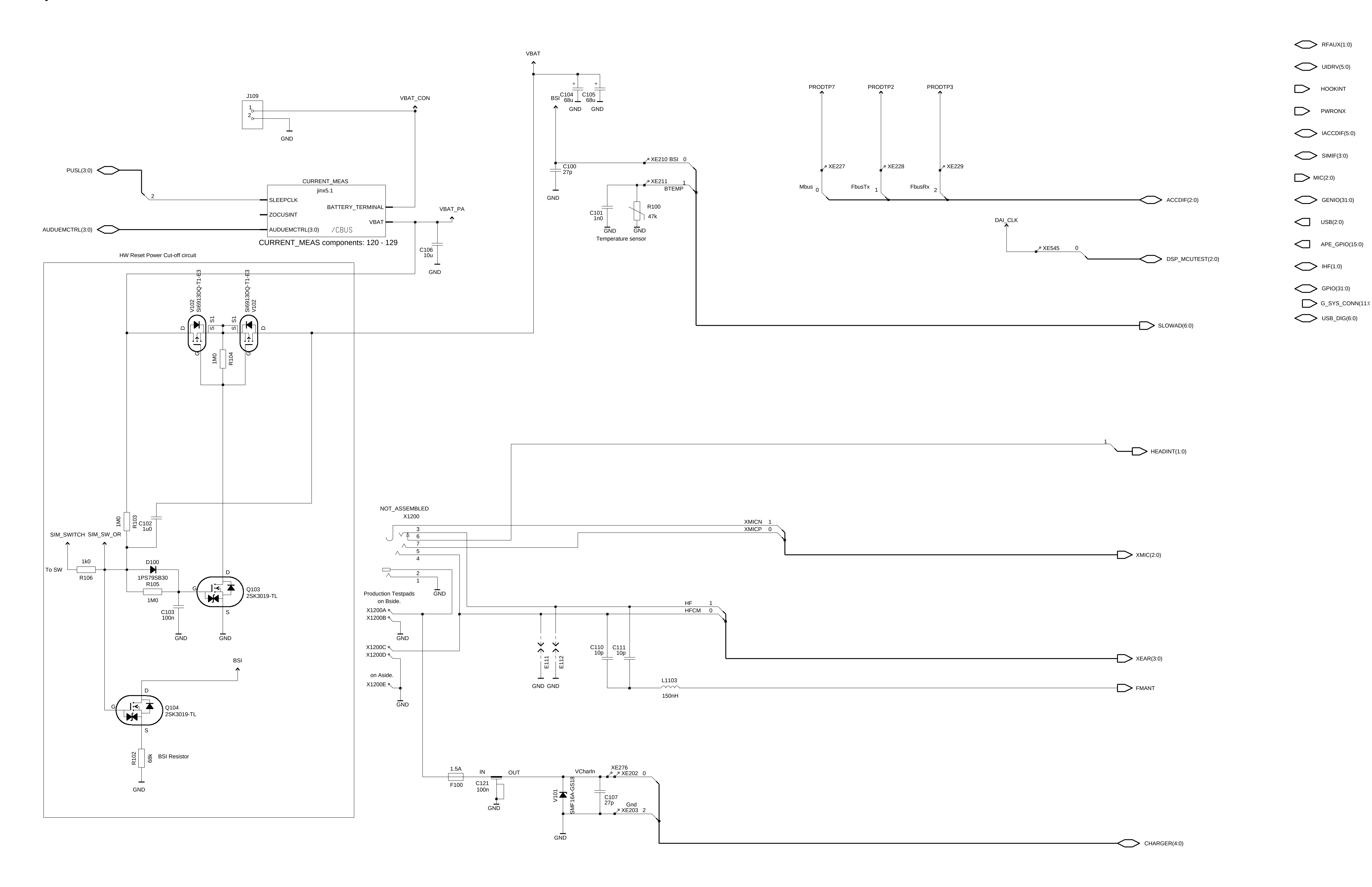


Camera

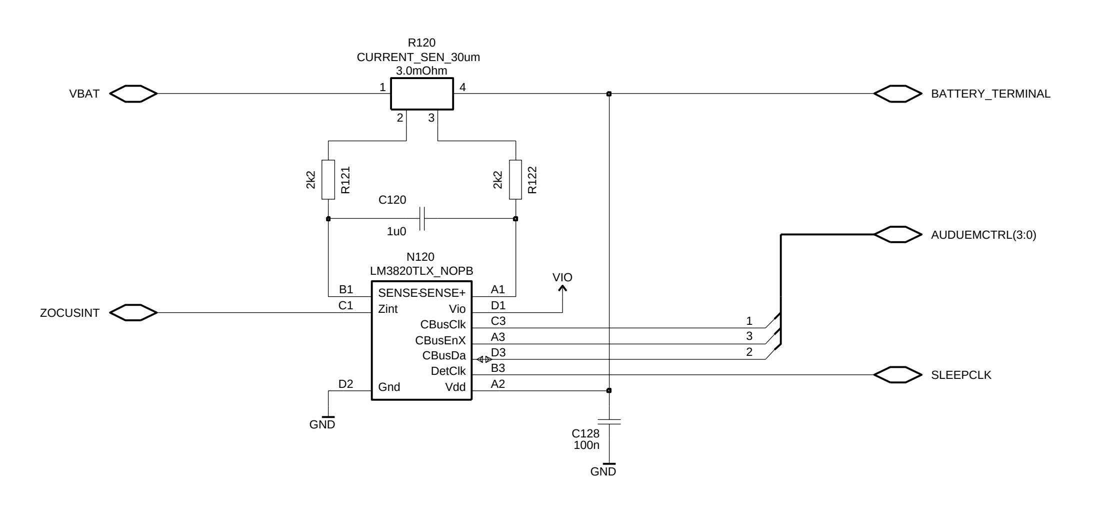


SDA
SCL
CamClk
CamVctrl (shutdown)
XE426
XE425
XE904
XE427
Place near cam. socket
C904 10n
GND
G_CAMERA(7:0)
CCP(4:0)
CCPCLK_N
CCPCLK_P
CCPDATA_N
CCPDATA_P
XE507
XE506
XE505
XE504
G_CAMERA_1
GENIO(31:0)
GPIO(31:0)
AUDUEMCTRL(3:0)
LCDUI(2:0)
PUSL(3:0)
C910 100n
X1000
VCAP
AGND
XSHUTDOWN
EXT_CLK
CCI_SCL
CCI_SDA
DGND
V_ANA
V_DIG
To be mounted next to Jinx cam. conn
VFLASH1
L900
600R/100MHz
C900 100n
C901 27p
VCORE_LIN
L901
C902 100n
C903 27p

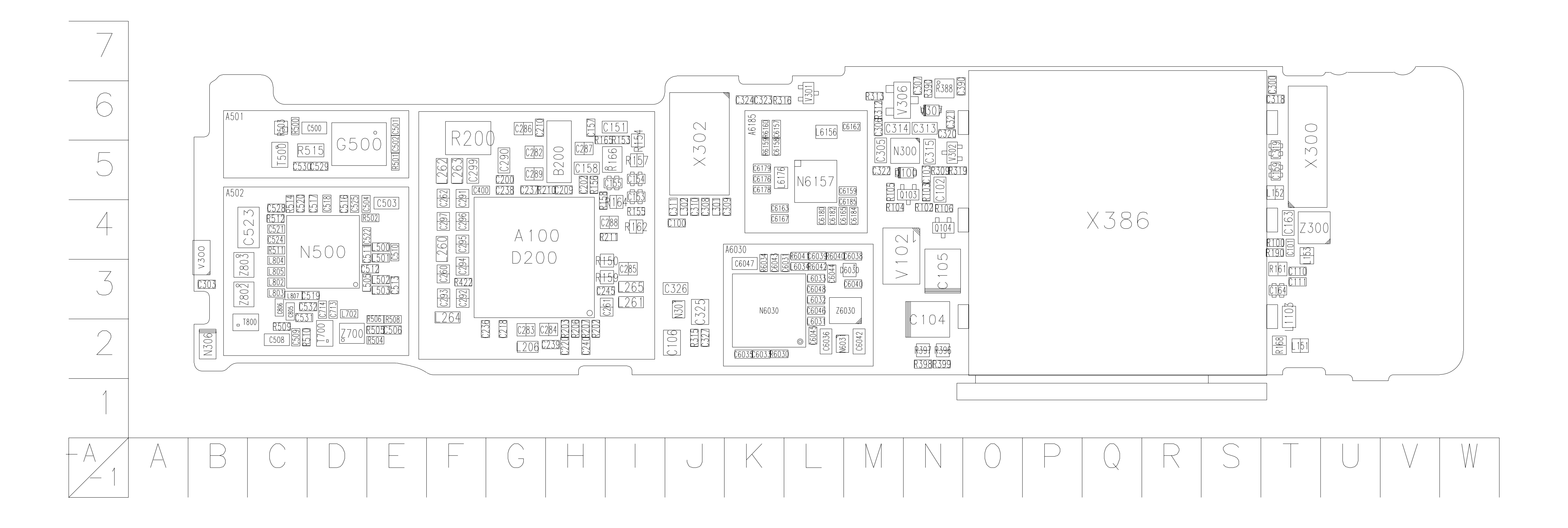
System connector

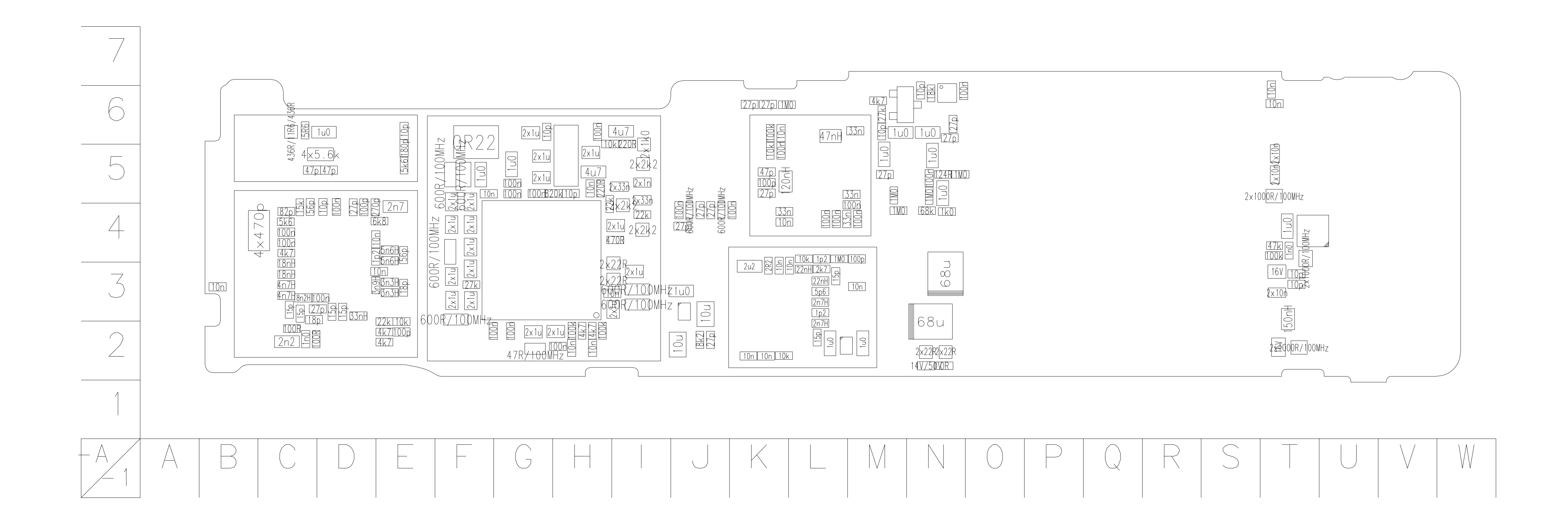


Current measure



Layouts, top





Layouts, bottom

